

XI. *On the Lamellicorn Beetles which possess exserted Mandibles and Labrum, and 10-jointed Antennæ. Being a Supplement to a Memoir published in the Fourth Volume of the Transactions of the Entomological Society. By J. O. WESTWOOD, Esq., F.L.S., &c.*

[Read 7th June, 1852.]

DURING the ten years which have elapsed since my paper upon those genera of Lamellicorn beetles which agree in possessing exserted mandibles and labrum, and 10-jointed antennæ, was presented to the Entomological Society, I have neglected no opportunity of searching for any additional allied types of form not contained in that communication, and have now the pleasure of laying before the Society descriptions and figures of several new genera and species by way of supplement to my former memoir.

With respect to the distribution of the Lamellicorn insects into families, a highly important modification of the views of Latreille and MacLeay has been published by the late Dr. Erichson, in his work upon the *Coleoptera* of Germany (*Naturgeschichte der Insekten Deutschlands*, pp. 563, 717). We here find the *Lamellicornia* (including the *Lucanidæ*) divided into two primary groups. The first (corresponding with MacLeay's *Thalerophaga*, with the addition of the *Dynastidæ* and the exclusion of the *Glaphyridæ*) named

SCARABÆIDES PLEUROSTICTI.

(*Ligula* mento connata. *Spiracula abdominalia* 2—6 in segmentorum ventralium parte dorsali sita, septimum liberum. *Segmentum penultimum* dorsale ventraleque connata. *Larvæ maxillarum malis connatis*)—

And containing the families *Dynastidæ*, *Cetoniidæ*, *Rutelidæ*, and *Melolonthidæ* (with the *Anoplognathidæ*).

The second primary division is named

SCARABÆIDES LAPAROSTICTI.

(*Ligula* a mento discreta. *Spiracula abdominalia* inter segmenta ventralia dorsaliaque sita, omnia ab elytris obtecta. *Larvæ maxillarum malis discretis*.)

It will be at once perceived that the three characters upon which these divisions are founded involve important physiological

considerations, and are therefore entitled to more weight than merely artificial characters,—such as the number of joints in the antennæ or the number of spines on the tibiae. The separation or junction of the ligula (or labium) with the mentum of the perfect insect, as well as the separate or connate condition of the lobes of the maxillæ of the larvæ, are of course intimately connected with the nature of the food of the insect, whilst the position of the spiracles of the abdomen in the imago intimates corresponding variations in the nature of the residence or relative exposure to the air of the perfect insect.

The *Scarabæides laparosticti* are divided into two groups, corresponding with the remaining families of the Linnaean *Scarabæi* and the Linnaean *Lucani*.*

The following is Erichson's plan of distribution of the Scarabæideous portion of the *Laparosticti* :—

- A. Abdomen with six ventral semisegments.
- a. Epimera of the metathorax free.

I. GLAPHYRIDÆ. *Epimera metathoracis libera. Antennæ 10 vel 9 articulatæ. Abdomen segmentis ventralibus 6 liberis.*

Genera *Glaphyrus*, *Amphicoma*, &c., with *Aclopus*, Er., and the remarkable Australian genus *Phænognatha* of Hope, described and figured in the fourth volume of our Transactions, p. 113, pl. VI. fig. 5, as forming a natural transition to the *Hybosoridae*.†

II. HYBOSORIDÆ. Die fühlern 10-gliedrig. Die bauch-halbringe mit Ausnahme des letzten, mit einander fast verwachsen.

Genera 1. *Hybosorus*, MacLeay.

- 2. *Silphodes*, Westw., Trans. Ent. Soc. iv. 160; *Atimus*, Dej.; *Phæochrus*, Lap.‡
- 3. *Coilodes*, Westw. Trans. Ent. Soc. iv. 163.§
- 4. *Dicracodon*, Erichson ;|| *Chætodus basalis*, Westw. Trans. Ent. Soc. iv. 166.

* Notwithstanding the relations involved in the employment of Erichson's primary characters, I cannot but think that the views of Linnaeus and Latreille, in dividing the Lamellicorns into two groups, *Scarabæus* and *Lucanus*, are to be preferred to those of Erichson.

† *Phænognatha* appears to me to be much more nearly related to *Pachypus*, which Dr. Erichson places in the family *Melolonthidæ*.

‡ Erichson adopts Laporte's name for this genus. The names however of genera, so slovenly characterized as not to be recognizable, are no better than MS. or catalogue names, and must give way to names attached to correct detailed descriptions and full accompanying figures.

§ Erichson hypercritically has altered this name to *Coelodes*.

|| The type of this genus is the insect which I described under the name of

5. *Apalonychus*,* Westw. Trans. Ent. Soc. iv. 168
(*Trichops*, Dej. Cat.).

III. GEOTRUPINI. *Epimera* metathoracis libera. *Antennæ* 11-articulatæ. *Abdomen* segmentis ventralibus 6.

Genera *Geotrupes*, *Lethrus*, *Odontæus*, *Bolboceras*, *Athyreus*.

Obs.—Ample details of the generic structure of the last three genera are given in the plates illustrating my three papers on the *Athyrei* and *Bolbocerata* in the twentieth and twenty-first volumes of the Linnæan Transactions. Monographs of the genera *Athyreus* and *Bolboceras* have also been published by Dr. Klug in the *Nova Acta*.

β. *Epimera* of the metathorax concealed.

IV. COPRIDES. *Antennæ* 9 vel 8-articulatæ. *Abdomen* segmentis ventralibus sex connatis. *Tibiæ* posticæ calcare singulo.

V. APHODIIDÆ. *Antennæ* 9-articulatæ. *Abdomen* segmentis ventralibus 6 liberis. *Tibiæ* posticæ spinis terminalibus binis.

Obs.—The genera *Euparia*, *Ægialia*, *Chiron*, *Ryparus*, Dej., *Corythoderus*, Kl., and *Chætopisthes*, Westw., are assigned to this family.

VI. ORPHNIDÆ. *Antennæ* 10-articulatæ. *Abdomen* segmentis ventralibus 6. *Tibiæ* posticæ spinis terminalibus binis.

Genera 1. *Hypalus*, Dej. (*Geobius*, Brullé, Laporte, and Westw. Trans. Ent. Soc. iv. 171†).

2. *Orphnus*, MacLeay, Westw. Trans. Ent. Soc. iv. 175.
3. *Triodontus*, Westw. Trans. Ent. Soc. iv. 172.
4. *Ægidium*, Dej., Westw. Trans. Ent. Soc. iv. 173; and
5. *Ochodæus*, including *Codocera*, Eschsch. (*Stomphax*, Fischer; *Psephus*, MacLeay, MS., Kirby and Spence, Intr. iii. 678).

B. Abdomen with five ventral semisegments.

“*Chætodus? basalis*,” from a specimen in Mr. Melly’s collection, of which the head was wanting. Dr. Erichson, having perfect individuals from Peru, gives the following as its generic characters:—“*DICRAEODON*, Er. *Mandibulae extus acute bidentatae. Tibiæ graciles posteriores extus medio obsolete transversim carinatae, antice extus crenulatae, apice acute bidentatae. Unguiculi simplices.*” *Conspic.* Ins. Col. Peru, Arch. f. Naturg. 13 Jahrg. 1 Bd. i. 104.

* Erichson writes this name *Hapalonychus*.

† Erichson adopts Dejean’s uncharacterized name instead of *Geobius*, the latter being previously used for a genus of *Carabidæ* by Dejean.

VII. **TROGIDÆ.** (*Metathoracis* epimera obtecta. *Antennæ* clava globulosa persoliata. *Abdomen* segmentis ventralibus 5.)
Thus divided :—

I. Die Augen ungetheilt.

A. Die Fühlerkeule einfach durchblättert.

Genera 1. *Trox*, F.

2. *Omorgus*, Er.*

3. *Cryptogenius*, Westw. Trans. Ent. Soc. iv. 169.

B. Das erste glied der fühlérkeule napfformig, die folgenden umschliessend.

Genera 1. *Anaides*, Westw., Trans. Ent. Soc. iv. 167.

2. *Chætodus*, Westw., ib. 165.†

3. *Liparochrus*, Erichson (see post).

II. Die Augen durch den einspringenden Kopfrand unvollständig getheilt.

Genera. *Sphaeromorphus*, *Synarmostes*, *Clocotus* and *Acanthocerus*, MacLeay. See Germar's Memoir on these genera in the Zeitschrift f. d. Entomol. iv.

This separation of the *Geotrupidæ* into two families, *Geotrupidæ* and *Hybosoridæ*, and of the *Trogidæ* also into two families, *Orphnidæ* and *Trogidæ*, is an evident improvement. I cannot however but think that the variation in the number of segments in the abdomen is a character of too slight importance to be employed as the distinctive mark of the higher divisions in families.

* *Omorgus* (Er. Arch. f. Nat. 13 Jahrg. 1 Bd. p. 111) is a dismemberment from the genus *Trox*, characterized thus :—“ *Ligula* prominula cornea. *Palpi* labiales articulo 1mo longiore 2do. *Maxillarum* mala interior uncis duobus cornis armata, inferiore simplici, superiore bifido. *Prothorax* haud ciliatus :” it is divided into two sections : A, with the scutellum hastate and the hind tibiæ unarmed, *Tr. squalidus*, *Ol. verrucosus*, *K. Australasiæ*, *Latr.*, &c.; and B, with the scutellum oblong, and the hind tibiæ armed with small spines. Six South American species, one wingless, *Tr. bullatus*, Curtis, the others winged, *Tr. brevicollis*, Er. (*leprosus*, Dej.) &c.

Phoberus, MacLeay, (Horæ Ent. i. 137,) founded on *Tr. horridus*, Fab., a Cape of Good Hope species, is overlooked by Erichson in his list of genera of *Trogidæ*. It is described by MacLeay “ scutello haud distincto.” The scutellum is, however, distinct enough in two specimens in my Collection.

† The characters employed by Dr. Erichson to distinguish his primary divisions and families are, I think, fully proved to be unsatisfactory and unnatural, when we see *Chætodus* removed from *Silphodes*, *Apalonychus*, &c. (amongst Erichson's *Hybosoridæ*) and arranged far apart from the preceding in the family of *Trogidæ*. A comparison of the structural details of *Silphodes* and *Chætodus*, given in plate XI. of the fourth volume of our Transactions, will, I think, convince every one of the extremely intimate relation of these two genera.

The additions which I have now to make to my former memoir belong to the last three of the subdivisional sections in the table of the genera given in p. 158 of my former memoir, which terminated with the genera *Orphnus* and *Ægidium*.

OCHODÆUS.

Ochodæus, Megerle, MS., Dej. Cat. 1st ed. p. 56; St. Farg. et Serv. Enc. M. x. 360; Mulsant, Lamellic. de France, p. 341; *Psephus*, MacLeay, MS., Kirby and Spence, Introd. to Ent. iii. p. 678; *Codocera*, Eschsch. Germ. Mag. iv. 397; *Stomphax*, Fischer, Entom. Imp. Russ. ii. p. 158; St. Farg. et Serv. Enc. M. x. p. 501.

The 10-jointed structure of the antennæ of this genus, mentioned in my previous paper (Trans. Ent. Soc. iv. p. 156), (contrary to the descriptions of St. Fargeau and Serville, Latreille and Mulsant), has been confirmed by Erichson (Naturg. Ins. Deutsch. p. 922). The structure also of the antennæ, labrum, mandibles and maxillæ of the type *O. chrysomelinus* having been represented in the same memoir, (pl. 12, figs. 3a, b, c, d, e,) it will only be necessary in this place to notice the structure of the lower lip and its various parts, the epimera of the metathorax, the tibial unguis, and the ventral articulation of the abdomen, with the view of showing its affinity with *Orphnus* and *Ægidium*, as indicated in my tabular arrangement of the genera (Trans. Ent. Soc. iv. 158), and as given by Erichson as above mentioned in the family *Orphnidæ*.

The number of species of *Odontæus* is small, five only having yet been described. They appear however to be widely distributed, being found, according to Dr. Erichson (who mentions his knowledge of five species), in all the quarters of the globe except Australia. The following is a synopsis of all the species hitherto described, with the addition of two new ones from my own Collection:—

Sp. 1. *Ochodæus chrysomelinus*, Fabricius, &c.

Ovalis, subconvexus; fulvus, supra setulosus; clypeo ad latera bisinuato, capite et pronoto aspere granulosis, elytrisque ciliatis his striato-punctatis, interstitiis punctatis; femoribus posicis subtus dente versus apicem parvo armatis.

Long. circ. lin. 2.

Habitat in Gallia, Germania, Austria, nec non in Albania.
(Dom. S. S. Saunders.)

Sp. 2. *Ochodæus rufus*, Guérin-Méneville, Icon. R. An. Ins. p. 83, pl. 22, fig. 6.

“ Très voisine de l'*Ochodæus chrysomelinus* de Fabr. ; mais elle est un peu plus grande ; tout son corps est d'un roux assez vif, luisant ; l'extremité des mandibules, les yeux et le bord antérieur du corselet sont bruns ; la tête et le corselet sont ponctués ; les elytres ont des points plus forts, avec une petite strie près de la suture, et quelques faibles traces de stries sur le reste de leur surface ; les pattes sont velues et ciliées, les intermediaires et posterieures ont la jambe dilatée au bout et terminée par une couronne de l'épines assez longues.”

“ Habite le Senegal.”

Mus. Guérin.

Sp. 3. *Ochodæus miliaris*, Klug, Col. Madagascar, p. 76.

“ *O. brunneus* ; capite thoraceque granulatis ; elytris punctato-striatis, in interstitiis elevato-punctatis.”

Long. corp. lin. 3.

Habitat Madagascar.

Mus. Reg. Berol.

Statura *O. chrysomelini*. Obscure brunneus, ferrugineo-pilosus.

Caput punctis elevatis scabrum ; postice obsolete punctatum, labro emarginato producto ; mandibulis arcuatis, validis, intus 1-dentatis, antennis palpisque concoloribus. Thorax ubique confertim elevato-punctatus. Pectus vase impresso-punctatum. Segmenta ventralia vix punctata, testacea. Scutellum vase punctatum. Elytra punctato-striata, punctis magnis impressis, in interstitiis punctis sparsis elevatis scabra. Pedes concolores.

Sp. 4. *Ochodæus lutescens*, Westw. n. sp.

Luteus, obscurus ; capite, pronoti medio postice scutelloque brunneis, supra undique granulis minutissimis obsitus, et luteo-setosissimus ; mandibulis porrectis, 5-dentatis, dentibus regularibus.

Long. corp. lin. 4.

Habitat in India Orientali. D. Boys.

In Mus. Westwood.

O. chrysomelino multo major et magis depresso. Caput supra planum, margine antico paullo elevato et porrecto, carina semicirculari submarginali ; tuberculisque duobus obliquis

intus carinam. Labrum porrectum, lutescens, angulis rotundatis, in medio emarginato, longe setoso. Mandibulæ porrectæ, supra concavæ, lutescentes, singulo dentibus 5 castaneis (apicali inclusu) sensim majoribus, duobus apicalibus acutis. Antennæ pallide lutescentes, articulis 6 et 7 intus angulatis setisque nonnullis instructis, clava ovali compressa. Pronotum transversum, margine postico curvato, luteum, opacum, undique granulatum et luteo longe-setosum; regione antescutellari brunnea. Scutellum elongato-triangulare, brunneum. Elytra late ovata, subdepressa, pronoto concoloria, granulata et setosa, singulo striis novem punctorum, striis 2 et 3, e scutello, magis approximatis, duabus externis fere obsoletis. Corpus infra cum pedibus lutescens.

Plate IX. fig. 1, Insectum magnitudine auctum; 1a, caput supra visum; 1b, labrum; 1c, maxilla; 1d, instrumenta labialia; 1e, unguis tarsorum.

Sp. 5. *Ochodæus pictus*, Westw. n. sp. (Pl. IX. fig. 2.)

Niger, parum nitidus, pronoti angulis lateralibus anticis et posticis elytrisque fulvis, horum humeris, fascia irregulari media apiceque nigris, supra undique minutissime granulatus parum setosus, mandibulæ irregulariter dentatis.

Long. corp. lin. 3½.

Habitat in India Orientali. (D. Boys.)

In Mus. Westwood.

Caput supra fere planum, utrinque ante insertionem antennarum tuberculo elevato instructum, supra granulatum et parum setosum. Labrum nigrum, lateribus luteis. Mandibulæ nigræ, dente apicali acuto, dentibus duobus parvis mediis, supero (præsertim in mandibula sinistra) fere obsoleto, dentibusque duobus conjunctis basalibus. Antennæ piceæ, clava magna nigra, apice luteo. Pronotum nigrum granulosum, parum setosum, lateribus fulvis, colore fulvo in angulis anticis et posticis in maculas magnas dilatato. Elytra brevia, lata, subdepressa, minutissime granulata et parum setosa, fulva, singulo striis novem punctorum. Podex, corpus infra et pedes nigri, tarsis piceis.

Fig. 2, Insectum magnitudine auctum; 2a, mandibula dextra; 2b, mandibula sinistra; 2c, maxilla; 2d, instrumenta labialia; 2e, antenna.

Sp. 6. *Ochodæus bituberculatus*, Erichson, Col. Peru, p. 111.
O. testaceus, testaceo-setulosus, fronte bituberculata, femoribus
 muticis.
 Long. prope lin. 3.
 Habitat Peru.
 In Mus. Reg. Berol.

Sp. 7. *Ochodæus ferrugineus*, Westw.
Lethrus ferrugineus, Eschscholtz in Mem. Acad. Sc. St. Petersb.
 vi. 151.
Codocera ferrugineum, Germar, Mag. d. Ent. iv. 398.
Stomphax crucirostris, Fischer, Entomog. de la Russie, ii. p.
 159, tab. 32, f. 1.
 Magnitudo *Aphodii fmetarii*, at latior; obscure fulvus, setosus;
 mandibulis elongatis, acutis, supra antice emarginatis apice
 cruciatis; antennarum geniculatarum articulo 1mo magno,
 valde hirto; oculis nigris, elytris striatis.
 Long. corp. lin. 3.
 Habitat Caucasus, and Teflis in Georgia.

This species was proposed as a genus to be placed among the *Lucanidæ* by Fischer von Waldheim, near the genus *Œsalus*, to which it bears a strong analogy. Dr. Erichson, however, who had doubtless an opportunity of examining the insect, refers it to the present genus, with the observation that it is "einer art welche durch längere, gerade, mehr vorgestreckte mandibeln von den übrigen, namentlich von dem allgemeiner bekannten *O. chrysomelinus* abweicht und deshalb für einen *Lucaninen* angesprochen wurde. Irrthümlich ist von Fischer die führerkeule als 4-gliedrig beschrieben, und abgebildet, sie ist ebenso als beim *O. chrysomelinus* gebildet von dem die obige art, ausser in der form der mandibeln, keine erheblichere abweichung zeigt, als eine der vier anderen mir bekannten arten."

The three following additional new species are unique in the Collection of M. Reiche, to whom I am indebted for an opportunity of describing them, and by whom the specific names adopted below have been proposed.

Sp. 8. *Ochodæus Americanus*, n. sp.
Piceo-castaneus, nitidus, punctatus, luteo-setosus; mandibula-

rum margine interno 3-dentato, vertice carina transversa media; antennarum clava lutea.

Long. corp. lin. $3\frac{1}{2}$.

Habitat in America Boreali.

In Mus. Reiche.

Individuis majoribus *O. chrysomelini* magnitudine æqualis at magis elongatus, coloreque obscuriori. Caput punctatissimum, margine antico clypei magis elevato nitido et bi-angu- lato. Mandibulæ supra concavæ, apice subacutæ, margine interno tridentato, sinistra inter apicem et dentem primum paullo producta; vertex carina tenui lævi polita transversa abbreviata notatus. Antennæ lutescentes. Prothorax punc- tatus, valde setosus. Elytra punctato-striata, spatiis inter strias punctis minutis setigeris obsitis, punctis fere in lineas tres longitudinales inter paria striarum dispositis. Pedes picei, femoribus magis rufescensibus, tibiarum anticarum dentibus duobus apicalibus magnis, 3tio basali minuto.

Plate IX. fig. 3, mandibulæ cum clypeo.

Sp. 9. *Ochodæus luridus*, n. sp.

Oblongo-ovalis, punctatissimus, luteo-testaceus, capite castaneo, vertice tuberculis duobus inter oculos transverse positis, man- dibula dextra dente 1, sinistra 2-dentata.

Long. corp. fere lin. 4.

Habitat in Mexico.

In Mus. Reiche. (An *O. bituberculatus*, Erich.?)

Præcedenti paullo major, et magis ovalis. Caput punctis parvis obsitum. Clypeus sub-concavus, medio marginis antici recto. Mandibula dextera apice acuto, denteque acuto in medio marginis interni armata; sinistra dente acuto sub apicem, cum incisione profunda ovali dente minori infero instructa; vertex carina transversa recta in medio interrupta, inter oculos. Antennæ lutescentes. Pronotum scabrum, punctis numerosissimis. Elytra striato-punctata, interstitiis inter strias punctis minutis setigeris triplici serie fere regulariter ordinatis. Pedes lutescentes, tibiis anticis ut in specie præ- cedenti formati.

Plate IX. fig. 4, mandibulæ cum clypeo.

Sp. 10. *Ochodæus rugatus*, n. sp. (Plate IX. fig. 5.)

Piceo-castaneus, elytris magis piceis, punctatus; capitidis ver- tice haud carinato, elytris profundius striatis, punctisque majoribus insculptis; tibiis anticis 3-dentatis.

Long. corp. lin. 3 $\frac{3}{4}$.

Habitat in Nova Granada.

In Mus. Reiche.

Præcedenti magnitudine æqualis, at magis depresso et subindulatior; rugositate elytrorum, tibiarumque anticarum structura primo intuitu e cæteris distinctissima. Caput supra fere planum, profundius punctatum, haud carinatum; clypei margine antico haud angulato, subrotundato. Antennæ piceæ, articulo basali castaneo (clava deterita). Mandibula dextera apice acuto, dente parvo acuto in medio marginis interni; sinistra dente majori interno, incisione profunda media, margine infero incisionis haud in dentem producto. Pronotum convexum, punctis majoribus et magis distantibus in sculptum. Elytra profundius striata punctisque profundis in striis dispositis, intersticiis inter strias rugosis, punctis paucioribus setosis. Pedes piceo-castanei, tibiis anticis dentibus duobus æqualibus apicalibus, denteque 3tio minori obtuso fere medio armatis.

Plate IX. fig. 5, Insectum magnitudine auctum; fig. 5a, caput supra visum cum labro; fig. 5b, mandibulæ; fig. 5c, maxillæ; fig. 5d, labium.

Obs. *Ochodæus chrysomelinus* habitat in Albania (Dom. S. S. Saunders), nec non in India Orientali (Dom. Hearsey). Individuum Indicum in Mus. Reichei vidi cum nomine *Ochodæus Indianus* inscriptum, ex Europæis haud differre videtur. Alterum amico Hearseio transmissum majus, dentibus mandibularum distinctioribus, elytrisque magis setosis, setis in seriebus quatuor fere regularibus inter strias dispositis; vix tamen species distincta.

LIPAROCIRUS, Erichson. (*Ranidia*, Westw. MS. olim.)

This genus has been merely indicated by Dr. Erichson in his distributions of the *Trogidæ* (above detailed) with the following short note: "Eine neue-hollandische gattung welche in der körperform an *Acanthocerus* erinnert, aber nicht kugeln kann; die hinteren schienen sind auch nicht schildförmig erweitert sondern dick und mit borsten reihen besetzt: das erste glied der führer ist ebenfalls nicht erweitert und die augen sind nicht durchsetzt." (Naturg. Ins. Deutschl. p. 925.)

The following are the characters of this curious genus:—

Corpus breve, ovale, gibbosum, glabrum, nitidum; capite parvo inermi; prothorace elytrorum fere latitudine, lateribus reflexis. *Caput* subquadratum, angulis anticis lateralibus rotundatis, margine antico parum reflexo. *Labrum* breve, trans-

versum, integrum. *Mandibulæ* porrectæ breves, basi lato, interne in laminam tenuem productæ, apice subfalcatæ supra versus apicem subemarginatae. *Maxillæ* lobis duobus coriaceis, setosis, inermibus. *Palpi* maxillares satis breves, articulo 2do et 4to longioribus. *Mentum* subquadratum, valde setosum. *Labium* breve, transversum, in medio emarginatum. *Palpi* labiales brevissimi, 3-articulati, in scapos duos latiores insidentes. *Antennæ* breves, 10-articulatae, articulo basali crasso setoso, tribus ultimis clavam subsemiglobularem formantibus, articulo 1mo clavæ majori reliquis duobus recipienti. *Prothorax* transversus, convexus, angulis anticis porrectis, marginibus lateralibus parum reflexis. *Scutellum* parvum, triangulare. *Elytra* gibbosa, tuberculo humerali prominenti. *Pedes* breves. *Tibiæ* anticæ 3-dentatae basique externe denticulatae et calcari unico longo terminali instructæ. *Tibiæ* 4-posticæ extus sensim crassiores, subtriquetræ, angulis serratis et setosis, calcaribus duobus longis instructæ. *Tarsi* cum unguiculis simplices.

The general appearance of the species of this genus is very similar to that of some of the more oval formed *Acanthocerides*, but the eyes are not divided by a canthus at the sides of the head, nor are the four hind *tibiæ* dilated; the clypeus is also much more quadrate, and the first joint of the club of the antennæ is cup-shaped, receiving the second and third joints, which, especially the last, is very much smaller than the first joint of the club. In its structural details it approaches very closely to *Anaides*, Westw. Trans. Ent. Soc. IV. Pl. XI. fig. 6, and details, and *Hybosorus*, ditto, Pl. XI. fig. 1.

Sp. 1. *Liparochrus geminatus*, Westw. (Plate IX. fig. 6.)

Piceo-niger, nitidus; capite transversim rugoso, pronoto et elytris vase punctatis; his striis gracillimis per paria dispositis impressis.

Long. corp. lin. 4.

Habitat in Nova Hollandia, prope Adelaidam.

In Mus. Westwood.

Caput subquadratum, angulis anticis lateralibus rotundatis, supra subconvexum; margine antico parum reflexo, supra transversim punctatum. Antennæ et mandibulæ castaneo-piceæ. Pronotum nigrum, nitidissimum, convexum, punctis parvis vase impressum, lateribus parum reflexis, subcastaneis et magis rugosis. Elytra convexa, nitida, sutura subcastanea,

parcius punctata, singulo striis 9 gracillimis, suturali impari, reliquis per paria dispositis. Pedes nigri.

Fig. 6, Insectum magnitudine auctum; 6 *a*, caput a latere visum; 6 *b*, clypeus, mandibula, labrum et antenna; 6 *c*, antenna; 6 *d*, apex clavæ antennarum; 6 *e*, mandibula; 6 *f*, maxilla; 6 *g*, instrumenta labialia; 6 *h*, tibia et tarsus anticus; 6 *i*, tibia et tarsus posticus.

Sp. 2. *Liparochrus fossulatus*, Westw.

Niger, capite punctatissimo obscurō, pronoto æneo-nitido, punctis minimis vage impresso, lateribus castaneis; elytris nigris, nitidis, callositate humerali castaneo, striatis, striis dorsibus punctis magnis notatis.

Long. corp. lin. 4.

Habitat in Nova Hollandia, prope Adelaidam.

In Mus. Westwood.

Caput subquadratum, angulis anticis rotundatis, disco punctatissimo. Mandibulæ et antennæ piccæ. Pronotum glaberimum, punctis minimis vage impressum æneum, lateribus reflexis castaneis. Elytra nigra, nitidissima, singulo striis novem, dorsalibus per paria dispositis, punctis magnis ovalibus parum profundis impressa. Pedes nigri.

Sp. 3. *Liparochrus sculptilis*, Westw. (Pl. IX. fig. 7.)

Piceo-niger, subnitidus, marginibus pronoti castaneis, undique punctatissimus, punctis pronoti et elytrorum transversim plus minusve confluentibus; elytris striatis, striis per paria dispositis, tibiis anticis 2-dentatis.

Long. corp. lin. 5.

Habitat in Novæ Hollandiæ partibus orientalibus, prope fluviū Mundarra dictum.

In Mus. D. Bond.

Præcedentibus duobus fere duplo major, minus convexus, subnitidus, punctatissimus. Caput parvum, subquadratum, angulis anticis rotundatis, punctis numerosis, distinctis et profundis impressum; vertice postice transversim elevato nitido, vix tamen carinato. Maxillæ lobi interni apice in dentem obtusum brevem producto. Pronotum punctis minutis oblongis transversis numerosissimis undique insculptum. Elytra rotundata, dorso parum depressa, undique punctis minutis curvatis plus minusve confluentibus, striisque novem simplicibus longitudinalibus in singulo ornatis, per paria dispositis; suturali sola impari. Pedes picei, tibiæ anticæ ante medium

parum dilatata, extus serrata, dentibus duobus apicalibus tantum armatis.

Plate IX. fig. 7, Insectum magnitudine auctum; fig. 7a, maxillarum lobi apicales; fig. 7b, tibia antica.

GLARESIS, Frivaldszky, MS.

This is another remarkable genus, merely indicated by Dr. Erichson, at the end of the Lamellicorn beetles, in the following note: "Der noch unbeschriebene gattung *Glareesis*, Friv., gehört auch vermutlich zu den *Trogiden*, ich habe zu indess noch nicht naher untersucht. Ein merkwürdiger kafer (*Gl. rufa*, Friv., aus Ungarn), welcher in seinen Aeussern auch an *Psammodius* erinnert. Die fühlnerkeule ist sehr gross. Die mandibeln sind an der wurzel breit, die spitze ist schmal und scharf. Die augen sind vom erweiterten kopfrande halb durchsetzt. Der hinterleib ist ganz häutig, von unten durch die verdickten hinterbeine gedeckt. Die hinterschienen sind an der spitze hakenformig velangert; die hinterfusse sehr kurz. Von den übrigen *Trogiden* weicht diese gattung auch dadurch merklich ab, dass die beine keine scharr,— sondern wirkliche Grabbeine sind."—*Naturg. Ins. Deutschl. Col.* p. 925, note.

The following are the detailed characters of this little genus, which, in the structure of the mouth, appears to me to approach much nearer *Orphnus* and *Ægidium* than to *Trogidæ*. The structure of the antennæ, mandibles and maxillæ clearly proves that there is no real relation between this genus and *Psammodius*.

Corpus obovatum, antice angustius, convexum, setulosum. *Caput* (fig. 8 a), breve, latum, inerme, utrinque ante lobum oculos secantem incisum, oculi septo semidivisi (fig. 8 b). *Clypeus* brevissimus. *Labrum* breve, transversum, vix emarginatum, angulis lateralibus rotundatis, ciliatum. *Mandibulæ* porrectæ, corneæ, extus rotundatae hirsutæ, basi latiores, dente acuto curvato terminatae, intus ante apicem lobo lato truncato, et incisione prope basin, membrana obsita, instructæ (fig. 8 c). *Maxillæ* elongatae bilobatae, lobis spinulis seu ciliis robustis curvatis armatis, extus setis longis instructæ. *Palpi* maxillares breves, articulo basali brevissimo; ultimo crassiori elongato-ovale (fig. 8 d). *Mentum* subquadratum, antice paullo latius, valde setosum. *Labium* vix productum, setis obtectum. *Palpi* labiales, breves, clavati, articulo basali brevissimo, tertio magno subtruncato (fig. 8 e).

Antennæ breves, 10-articulatæ, articulo 1mo apice clavato, 2ndo robusto, 3—7 brevissimis oblique transversis, 8vo maximo reliquis duobus subincludenti (fig. 8*f*). *Prothorax* transversus, capite latior, antice paullo angustior, lateribus subrotundatis, angulis posticis acutis. *Elytra* magna, convexa, podicem tegentia, profunde sulcata, spatio angusto inter sulcos elevato setoso. *Pedes* antici breves. *Femora* crassa, tibiæ extus tridentatæ (fig. 8*g*). *Pedes* intermedii graciles, tibiæ prope medium spinula parva armatæ (fig. 8*h*). *Pedes* postici breves, femoribus valde incrassatis, tibiis brevibus latis pone medium extus emarginatis, apice in lobum crassum oblique truncatum producto (fig. 8*i*).

Species unica. *Glareesis Frivaldszkyi*, Westw.
(Pl. IX. fig. 8.)

Glareesis rufa, Frivaldszky, MS.

Totus luteo-rufescens, opacus, pronoto subnitido, capite tenuissime punctato, pronoto punctato, sulco medio impresso, elytrorum singulo 9-sulcato, spatio angusto inter sulcos granulato et setoso.

Long corp. lin. 2.

Habitat in Hungaria.

Mus. Hope, nostr. &c.

Fig. 8, Insectum magnitudine auctum; 8*a*, caput cum mandibula dextra; 8*b*, oculus septo semidivisus; 8*c*, mandibula; 8*d*, maxilla; 8*e*, mentum cum palpis lateribus; 8*f*, antenna; 8*g*, pes anticus; 8*h*, pes intermedius; 8*i*, pes posticus.

The family *Trogidae* has been further enriched with a new genus by M. Mulsant, the distinguished Entomologist of Lyons, under the name and character of

EREMAZUS.

“ Pieds intermédiaires aussi rapprochés que les autres à leur naissance. Ecusson visible. Elytres embrassant l’abdomen dans son pourtour, et cachant le pygidium. Epistome tronqué en devant. Labre transverse; débordant faiblement l’epistome, et laissant à découvert la majeure partie des mandibules, qui sont cornées. Antennes insérées au devant des yeux, sous un faible rebord de la tête: à premier article hérissé de cils. Yeux très-rétrécis en dessus par les joues et par le front, faiblement visibles près des angles de devant du prothorax; celui-ci non sillonné.

Palpes maxillaires à dernier article plus long de tous, rétréci de la base à l'extremité. Ventre moins long que les deux derniers segments pectoraux. Cuisses renflées. Jambes de devant fortement tridentées au côté externe. Tarses rétrécis à partir de l'extremité du premier article ; celui-ci en triangle allongé. Ongle unique. Corps suballongé.

“ Les insectes de cette coupe, par la forme de leurs corps, se rapprochent des premiers *Pleurophorates*, dont ils s'éloignent par la grosseur de leurs cuisses. Ils ont plus d'analogie avec les *Psammodiaires*, et semblent servir à unir ceux-ci aux *Trogiens*.”

It is to be regretted that M. Mulsant has omitted to describe the form of the scutellum, and to state whether the elytra are soldered together, or whether the insect is winged, as well as to describe the structure of the mandibles, maxillæ, mentum, and labium ; so that, in the absence of these particulars, we are quite unable to determine the precise affinities of the genus.

The genus consists of a single species.

Eremazus unistriatus, Mulsant, Proceed. Acad. des Scienc.

Lyon, 13 February, 1851.

“ Suballongé et subparallèle ; d'un fauve obscur sur la tête et sur le prothorax, plus pâle et plus roussâtre sur les elytres : celles-ci rayées d'une strie naissant du calus, et offrant postérieurement les traces de deux autres stries.”

Long. corp. $1\frac{2}{3}$ lin. ; lat. $\frac{2}{3}$ lin.

Habitat Algeria.

I take the opportunity of adding two further communications having reference to the previously-published Memoir upon these Lamellicorn insects, with which I have been also favoured by M. Reiche, of Paris.

Orphnus Verreauxii, Reiche. (Westw. in Trans. Ent. Soc. IV. p. 179.)

M. Reiche informs me that this insect is the true *Scarabæus Corydon*, Olivier, Ent. n. 227, t. 28, f. 245 ; Oliv. Abb. Sturm. i. p. 113, n. 227, t. 52, f. 4 ; Schonherr, Syn. Ins. i. p. 15.

Scarabæus Silenus, Jablonsky, Nat. S. ii. p. 87, n. 70, t. 10, f. 2.

Scarabæus Rhinoceros minor, Voet, Col. t. 18, f. 119, ed. Panz. i. p. 79, n. 119.

Triodontus Owas, Reiche, MS. (Pl. IX. fig. 9.)

Castaneo-piceus, nitidissimus lævis, capite cornu erecto armato, pronoto antice retuso, 6-dentato, elytris striisque longitudinalibus gracillimis vix punctatis.

Long. corp. lin. 7.

Habitat in Madagascar.

In Mus. Reiche, Parisiis.

Tr. nitidulo (Westw. Tr. Ent. Soc. IV. 173) triplo major, pronotoque magis armato. Caput semicirculare, nitidum, læve, margine antico parum elevato; vertice cornu valido erecto armatum. Mandibulæ acutissimæ, singula dentibus duobus marginis interni acutis (in dextera magis approximatis.) Maxillæ lobo supero dentibus duobus validis curvatis acutis armato; lobo infero etiam bidentato. Pronotum læve, nitidum, antice valde retusum, in medio dentibus duobus contiguis alterisque duobus in utroque latere, margine postico nec non basi elytrorum serie transversa impressionum profundarum. Elytra lævissima, nitida, singulo striis 9 gracillimis vix punctatis notata. Pedes castanei.

Plate IX. fig. 9, Insectum magnitudine auctum; fig. 9a, mandibulæ; fig. 9b, maxillarum lobi apicales; fig. 9c, antenuæ.